

MER Shift Reports

STS-107

Day 5 Shift 1

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 6

SHIFT 1

All ECLSS systems performing nominally.

Consumables:	Supply water	452.4 lb.
	Waste water	29.0 lb.
	Orbiter Nitrogen	227.8 lb.

Shift Leader
GMT 020/18:00



Thermal 1st Shift Landing Report
STS-107
January 20, 2003 11AM (020/17:00 GMT)

The performance of orbiter thermal systems is nominal and all subsystem temperatures are operating within acceptable limits.

On the attitude timeline, MOD pointing has replanned the state vectors to MET 06/12 days. Main landing gear tire temperatures are tracking the predictions well. The TCS attitude change recommendations for main landing gear tire thermal conditioning have not been incorporated into the ATL. MOD Pointing had projected that he would have the state vector replan thru the end of mission available at ~ 8 days MET (mid-mission).

Diana Coronado/John Tran

AVIONICS
FLIGHT CONTROL / GNC DAILY REPORT

01/20/03

STS-107
Daily Report
Flight Day 4

Flight controls and GNC systems are performing nominally. Last IMU align was 020/0217 GMT.

Chuck Beatty
Jan. 20, 2003

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 5 SHIFT 1
GMT 020/17:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

APU - All APU heaters are functioning nominally on the 'A' string. All APU on-orbit parameters are nominal.

FC/PRSD - Subsystem performance is nominal.

The fuel cell 3 alternate water line temperature continues to be erratic, indicating slight leakage of warm fuel cell water through the check valve.

EPDC - The only problem being worked by EPDC is the intermittent "sluggish" AC2 phase B current response. The plots for the last 24 hours indicate that there was one new occurrence of a sluggish responses on AC2 by phase B during the water loop cycle. The EPDC team will continue to work this issue.

The crew reported that the BIOPACK freezer turned off when they opened the freezer door. The MAR2 circuit breaker was checked and found to still be in the "ON" position. The MAR2 circuit breaker was cycled to clean the contacts, but the BIOPACK freezer remained de-energized. The crew was instructed to cycle the power switch on the freezer, and nominal freezer operations were restored.

All monitored voltage and current measurements were nominal. The 24 hour plots and the strip chart recorder data was reviewed with no unusual signatures noted.

Walter Scott
ESD Team Lead

MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT

TO: MER MANAGER

SUBJECT: FD05; 2nd SHIFT REPORT

GMT: 020:17:00

EVENTS:

Blue team pre-sleep and Red team post-sleep activities were completed nominally.
FCE console forwarded ergometer contact information to MMACS.

FORWARD ACTIONS:

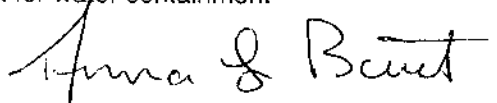
Monitor water issue with the HUMSEP. Monitor vacuum cleaner usage during IFM activities.

CHITS (Monitoring / Working / Waiting for Closure):

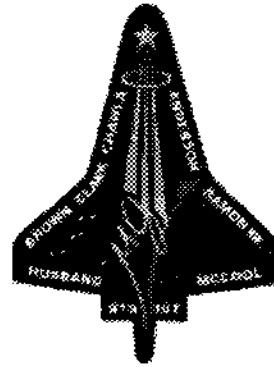
There are currently 5 CHITs in the system, 4 CLOSED, 1 OPEN (info only). NONE belong to Flight Crew Equipment

HARDWARE STATUS:

There have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.
FCE is monitoring IFM/MMACS loops in assist for water containment



Anna L. Burt
Flight Crew Equipment- GFE/CFE



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/20/2003

GMT: 020/17:00:00

Shift: 1st

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Misty Wohl

Signature:

A handwritten signature in black ink, appearing to read "Misty Wohl", written over a horizontal line.

STS-107 (OV-102 FLT 28)

1/20/03

7:30 AM

On-Orbit Shift Report

The HYD/WSB Systems are operating nominally and all parameters within their expected ranges. There have been no additional circulation pump runs for thermal conditioning or bootstrap re-pressurization. The HYD/WSB group is not working any issues at this time.

Total Circ Pump Runs

Thermal	Accumulator Recharges
Sys 1: 1 for elevon Park	0
Sys 2: 0 runs	0
Sys 3: 0 runs	0

Charles Ritrivi

HYD/WSB SSE

STS-107
MER Comm and Track Shift Report
GMT 20:13:00
Shift 1

All comm and track systems are operating nominally.

COMM String 1 c/o (Part A) scheduled for GMT 020/16:00.

Martha M. May

MER Comm & Track

MER Shuttle Safety Console
STS-107 FD 5 Shift 1
GMT 020:17:00

The MER Safety Console is not working any safety of flight issues. SR&QA presented MER manager with the GCAR for the shuttle vacuum cleaner. The crew/FCT mentioned earlier that the shuttle vacuum cleaner may be used to clean around a troubled VTR in Spacehab, in which water may be present. The Shuttle "wet/dry" vacuum cleaner is certified to do so, up to 12 oz. of fluids. No other issues/concerns to address.

Doug McMullen

STS-107

OMS/RCS Day 5 Shift 1 Report

INITIATOR: Arrieta
DATE: January 20, 2003

MET: 04/02:50
GMT: 020/18:29
CENTRAL TIME: 12:29 PM CST

	Left		Right		Forward	
	Oxidizer	Fuel	Oxidizer	Fuel	Oxidizer	Fuel
PFS %	77.2	77.2	76.0	75.2	66.8	64.2
Interconnect Usage	0.000		0.000			

ORBIT

1. The left OMS crossfeed zone 1 A heater thermostat continues to dither.
2. Crossfeed Line Repress using the ROMS B crossfeed valves, occurred at 020/18:16 GMT. In anticipation of the tomorrow's right OMS interconnect the valves were left OP (lb - OP).
3. Left OMS GN2 Accumulator pressure is holding.

Data Review

1. OMS and RCS system data has been reviewed up through 020/18:00 GMT. System performance continues as expected with no anomalies noted.
2. All vernier jet firing through 020/08:00:00.000 GMT have been reviewed. There have been no anomalous pulses.

RCS PRESSURIZATION LEG FRCS: A LRCS: A RRCS: A

23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

F1F		L1A	X	R1A	X
F2F		L3A	X	R3A	X
F3F		L1L		R1R	
F1L		L2L		R2R	
F3L	X	L3L	X	R3R	X
F2R		L4L		R4R	
F4R	X	L1U	X	R1U	X
F1D	X	L2U		R2U	
F2D	X	L4U		R4U	
F3D	X	L2D	X	R2D	X
F4D	X	L3D	X	R3D	X
F1U	X	L4D	X	R4D	X
F2U	X				
F3U	X				

MER Shift Reports

STS-107

Day 5 Shift 2

STS-107 ESD SYSTEMS SHIFT REPORT

DAY 5 SHIFT 2

GMT 021/00:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

OMS/RCS

1. **The left OMS crossfeed zone 1 A heater thermostat continues to dither.**
2. **Crossfeed Line Repress using the ROMS B crossfeed valves,** occurred at 020/18:16 GMT. In anticipation of the tomorrow's right OMS interconnect the valves were left OP (tb – OP).
3. **Left OMS GN2 Accumulator pressure is holding.**
4. OMS and RCS system data has been reviewed up through 020/18:00 GMT. System performance continues as expected with no anomalies noted.
5. All vernier jet firing through 020/08:00:00.000 GMT have been reviewed. There have been no anomalous pulses.
6. 23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

Tom Davies
ESD Team Lead



STS-107 MER Thermal 2nd Shift Report

021/01:00 GMT, 19:00 CST 01/20/2003

All thermal systems are performing nominally and all temperatures are within acceptable limits.

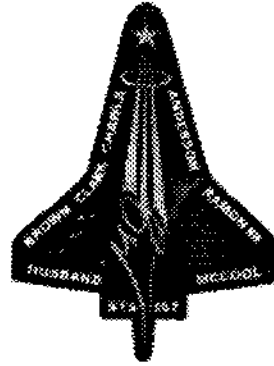
EECOM asked TCS if any upcoming attitudes would affect the Space Hab internal environment temperature. TCS is looking at the ATL to find attitudes that will cause the Space Hab environment temperature to increase. The preliminary finding is no long duration 'hot' attitudes are planned. There are a few short gravity gradient attitudes with bay towards the sun (-XLV +YVV) and several periods where 2 revolutions of top sun are flown.

Steve Tidwell/Dan Reynolds

MER Shuttle Safety Console
STS-107 FD 5 Shift 2
GMT 021:01:00

The MER Safety Console has been investigating issues surrounding the problems in the Spacehab Moisture Removal System. Discussed the situation with Payload Safety's Dean Moreland and the SR&QA MMT representative Scott Johnson. Coordinated with Dean to have him attend a meeting with MOD concerning a troubleshooting and repair plan. Participated in a debrief after the meeting and a brief to the MMT representative. Supplied a copy of the Spacehab Payload Safety Hazard Report entitled "Rupture or Leak of Pressure System" to the MER Manager. Printed extra hardcopies for the console and the MMT rep.

Andy Foster



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/20/2003

GMT: 021/01:00:00

Shift: 2nd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Tom Swartley

Signature: Tom Swartley

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 6

SHIFT 2

All ECLSS systems performing nominally.

FCL 1 was positioned from Payload to interchanger at MET 4/05:29. This was done to lower the dew point in the shuttle crew compartment below the dew point in the Spacehab. Because the water separators aboard the Spacehab are temporarily off, this will help in controlling the dew point in Spacehab.

Consumables:	Supply water	515.7 lb.
	Waste water	40.5 lb.
	Orbiter Nitrogen	227.2 lb.

Shift Leader
GMT 02/01:00

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD05; 3rd SHIFT REPORT

GMT: 021:01:00

EVENTS:

A lot of discussions on the loop, earlier in the shift in regards to the procedure for resolving the HUPSEP water leakage issue and the RS1 and RS2 resolution.
Red to Blue team handover for daily activities.

FORWARD ACTIONS:

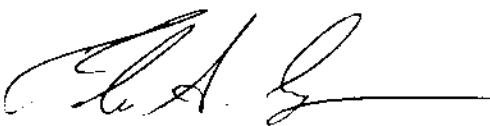
Monitor the water issue with the HUMSEP, which includes the agreed upon procedures. Monitor vacuum cleaner usage during IFM activities.

CHITS (Monitoring / Working / Waiting for Closure):

There are currently 5 CHITs in the system, 4 CLOSED, 1 withdrawn. NONE belong to Flight Crew Equipment

HARDWARE STATUS:

There have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.



Falco A. Campana
Flight Crew Equipment- GFE/CFE

MER Shift Reports

STS-107

Day 5 Shift 3

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 6

SHIFT 3

All ECLSS systems performing nominally.

Orbiter terminated FES dump at MET 04:15:57. The dump, which began at MET 04:10:01, was performed to offload supply water tanks.

Consumables:	Supply water	452.4 lb.
	Waste water	54.0 lb.
	Orbiter Nitrogen	222.4 lb.

Shift Leader
GMT 021/09:00

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 5 SHIFT 3
GMT 021/09:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics)
continue to function satisfactorily.

John Norris
ESD Team Lead

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD06; 1st SHIFT REPORT

GMT: 021:09:00

EVENTS:

FCE continuing to monitor discussions on the loop in regards to the procedure for resolving the HUMSEP water leakage issue and the RS1 and RS2 resolution.

FORWARD ACTIONS:

FCE plans to attend 10:00am CST meeting on HUMSEP IFM procedures. FCE anticipating a CHIT to review on procedures and don't expect to find any issues.

CHITS (Monitoring / Working / Waiting for Closure):

None of concern to FCE.

HARDWARE STATUS:

There have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.


Kevin Rullman
Flight Crew Equipment- GFE/CFE

MER Shuttle Safety Console
STS-107 FD 5 Shift 3
GMT 021:09:00

The MER Safety Console is not working any safety of flight issues.

Denise Londrigan



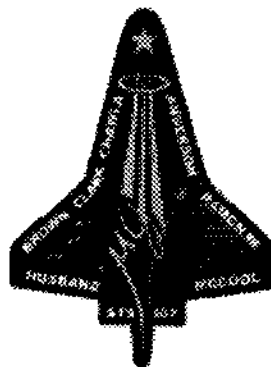
Thermal 3rd Shift Report

STS-107, January 21, 2003

3 AM, MET 04/17:21 (21/09:00 GMT)

All temperatures are within acceptable limits and all thermal systems are operating nominally. The MASTER file is still about 2 hours behind, it has been about 2 hours behind since midnight.

Shannon Belknap / Dave Norman



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/21/2003

GMT: 021/09:00:00

Shift: 3rd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Michael Frank

Signature: 